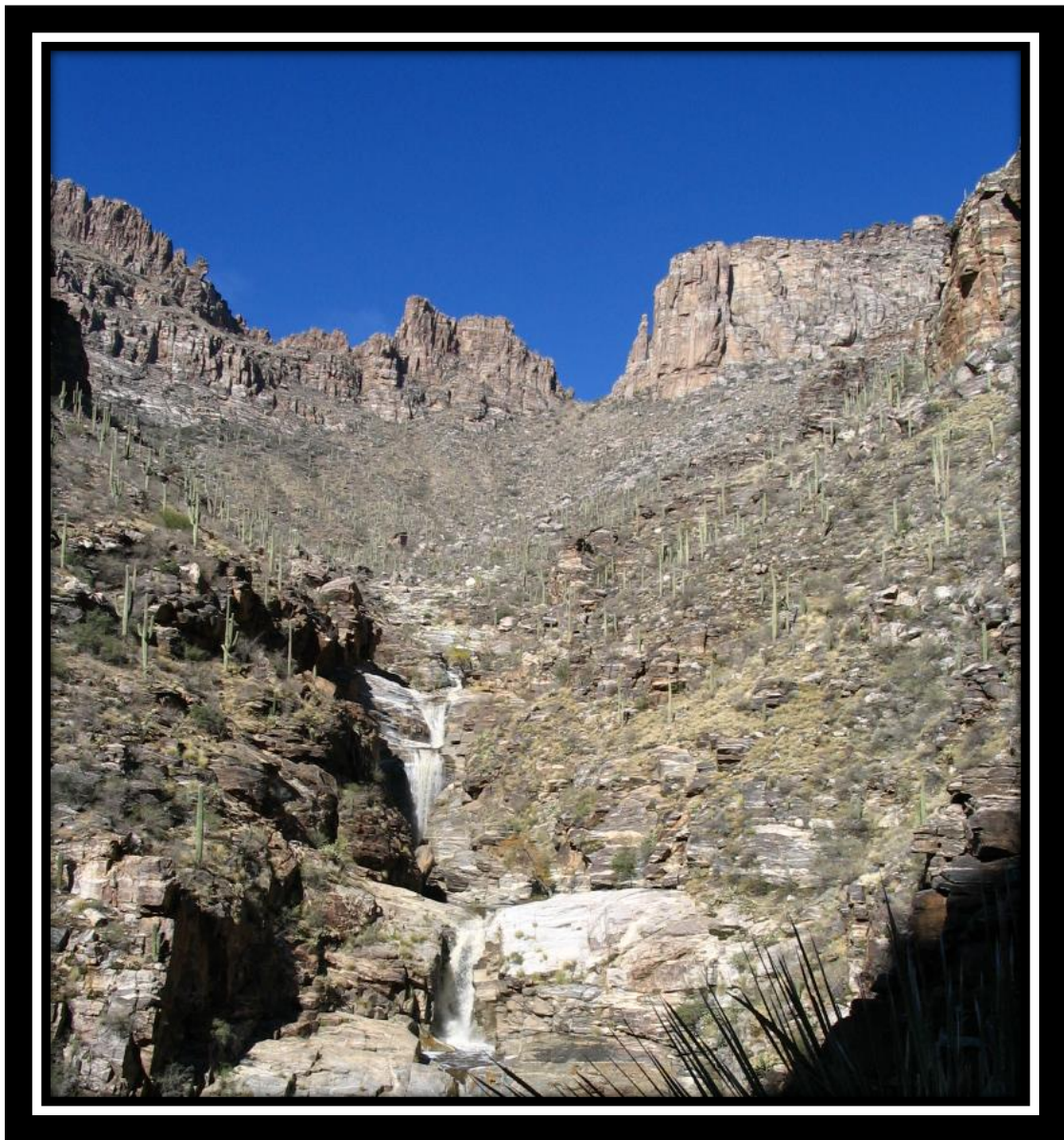


SABINO CANYON

SUSTAINABLE RECREATION CONCEPT PLAN



CORONADO NATIONAL FOREST – SANTA CATALINA RANGER DISTRICT – 2015

Sabino Canyon Sustainable Recreation Concept Plan 2015

Prepared by:

**UNITED STATES FOREST SERVICE
CORONADO NATIONAL FOREST
SANTA CATALINA RANGER DISTRICT**

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Background

It has always been a goal of the Forest Service to provide quality, multiple-spectrum recreation experiences in Sabino Canyon. This can pose a challenge when also protecting the unique natural and cultural resources that draw multitudes of visitors here. This concept plan update comes at a time when funding is being stretched and visitation is at its highest levels. Many facilities such as picnic tables, restrooms, grills, and roadways are in need of updating, replacement, or removal. Although there are no funds earmarked for these projects, we look at this plan as guidance to direct our management priorities. The vision of the Forest Service is to enhance enjoyment of the Canyon's unique features for a broad and diverse audience, while preserving the natural and historic character of the place. This plan supports this vision through a focus on shared, sustainable management of the resources and programs.

Goals and Objectives

















Engage Youth and Families: Desired outcome – create a diverse, engaged community around Sabino Canyon, now and in the future.

Provide a Gateway to the Coronado National Forest: Desired outcome – Sabino Canyon exposes local, national and international visitors to the environmental, recreational and cultural resources available throughout the forest. Visitors are knowledgeable of and engaged with all districts of the forest.

Sustainably Manage the Resources of Sabino Canyon: Desired outcome – visitors have access to special places and necessary facilities. Visitors partner with staff to keep the unit resilient in the face of budgetary, organizational and environmental changes.

Key Audiences

To achieve the stated goals and outcomes, it is vital that we think clearly about the audience for our actions. It is necessary to understand what these audiences value about Sabino Canyon, know the key elements of how they interact with the Canyon, and any limitations on their engagement. These audiences are defined as the Year-Round/Daily User; the Winter Surge Visitor; Youth and Family Visitors; and Volunteers & Partners. The table below shows the perceived current use of the different activities available in Sabino Canyon by each group.

Limited Use	Moderate Use	Intensive Use	Recreation and Healthy Outdoor Activity	Exhibits/ Controlled Interpretation	Guided Experiences/ Conservation Education	Immersive, User-Driven Experiences
						
Year-Round/ Daily Users						
<ul style="list-style-type: none"> Local residents, typically from within an 8 mile radius. Typically pass holders of some type (80%). Low need for support from staff to maintain their recreation experience. Activities are part of a weekly/daily routine, but may expand to include more activities. 						
Winter Surge Visitors						
<ul style="list-style-type: none"> Local residents typically from a larger, 20 mile radius. Includes national and international visitors, often visiting local residents or in groups. High need for orientation and interpretation; values the interpretive experience. Winter Surge is directly tied to environmental conditions in Sabino Canyon (water). 						
Youth & Families/ Vulnerable Populations						
<ul style="list-style-type: none"> Want and need the interpretive experience to fulfill educational or personal goals. Their experience is often moderated by other organizations – partners, schools, churches, community or membership organizations. First experience of Sabino Canyon is an opportunity to build long-term appreciation and connection. May need special assistance based on age, disability, income, etc. 						
Volunteers & Partners						
<ul style="list-style-type: none"> Drawn mainly from the Year-Round/ Daily User group. Involved in delivering programs and meeting management goals. Potential source of expertise and materials support for programs. Requires regular interaction with staff to maximize their potential. 						

The information above allows us to ask questions and make decisions regarding the visitation at Sabino Canyon. First, there are only two instances of Intensive Use – Year-Round/Daily Users engaged in Recreation and Healthy Outdoor Activity; and Youth & Families/Vulnerable Populations engaged in Immersive, User-Driven Experiences.

From this, we can infer that managing the experiences of these two segments of the visitor population effectively could reduce negative impacts on resources and facilities. We also see that the

Exhibits/Controlled Interpretation offerings in the Canyon are under-utilized; this is especially true of the exhibit in the Visitors Center.

Finally, we can look at the broad use groups for opportunities to better other goals. Increasing visitation from Youth & Families/Vulnerable Populations can potentially meet the goals of the Sky Islands Children's Forest, as well as regional and national goals to focus on youth and increase our relevance to diverse audiences. Seniors and disabled veterans would also fall into this segment, addressing other national goals (USDA, 2012).

According to the Southwestern Region Sustainable Recreation Framework, the Forest Service should be accomplishing these goals while decreasing both the agency and visitor's dependence on constructed facilities for a quality recreational experience. Per the Framework, the Forest Service has the opportunity to substitute programs for facilities. Given current staffing and budgetary realities, we can only accomplish this by engaging partners and volunteers in serving visitors.

Although this document targets our external audience, we must also consider the internal audience – Forest Service employees at the unit, forest, regional and national level. Their reactions, especially unit staff, must be considered in the long-term implementation of the plan.

Planning Process

Teams

In April 2014, a group of Forest Service resource specialists was assembled under the direction of the District Ranger for the purpose of updating the 1993 Sabino Canyon Recreation Concept Plan. The specialists were organized into two teams. A Core Team was assigned to develop the plan with periodic review and collaboration with a larger, more diverse, Extended Team. The Core Team, consisting of specialists in interpretive services, environmental education, and recreation planning and management, was responsible for the production of the planning document. The Extended Team, consisting of specialists in ecology, wildlife biology, archeology, landscape architecture, special uses, public affairs, engineering, roads, facilities, utilities, law enforcement, and fire management, was responsible for contributing specific skills or knowledge fundamental to the successful completion of the Plan (see Appendix A for a complete list of team members). The purpose of the Plan is to provide recommendations to guide management of Sabino Canyon toward a desirable future.

Process

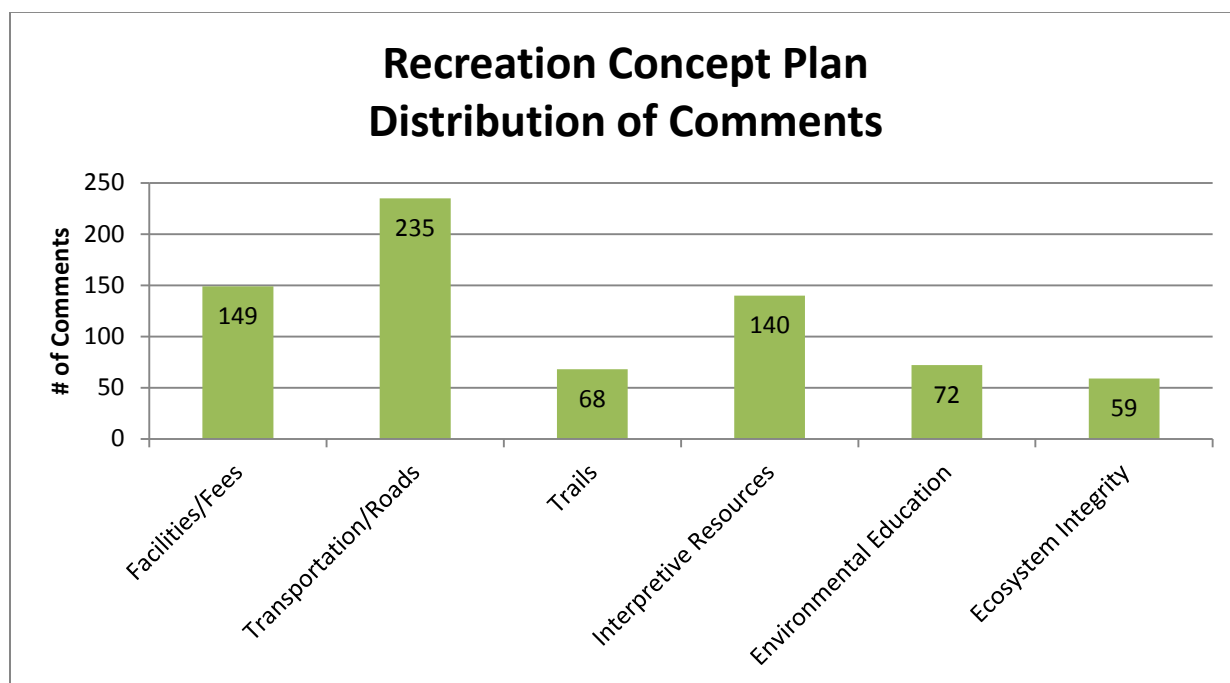
The process began internally with each member of the planning team developing a "vision" for the future of Sabino Canyon. Considerable time and effort was invested in the development of projects – organized into emphasis areas – that could help achieve desired sustainable recreation opportunities and conditions into the future. These recommendations were designed to guide the prescriptions for management of various settings and opportunities within the planning area.

In May 2014, the teams hosted a public meeting to elicit comments on the projects developed in the initial round of internal planning. Public participants were first asked to complete a 5-question survey to provide data on visitation preferences in the Canyon, and were then encouraged to browse various

subject stations representing each of the emphasis areas. Team members were present at each station to answer questions and collect comments on designated comment cards. Participants were also given the option to mail in comments for a period of 30 days following the public meeting. After the comment period closed, the team reconvened to input and analyze the data and discuss implications and new recommendations.

A second public meeting was held in July 2014. At this meeting, the teams presented a summary of the data collected at the first public meeting and provided an update on the responsive changes to the draft planning document. Participants were then asked to submit any additional comments on the latest changes to the Plan.

At the close of these comment opportunities, the team collected 723 individual comments on the draft Concept Plan. The graph below shows the distribution of comments in each emphasis area:



The individual comments were supplemented by the data collected from the survey. The survey questions provided valuable information regarding the visitor's preferred recreation activities in Sabino Canyon, favorite locations to recreate, preferred visitation days and the frequency of visitation (see results in Appendix B). This survey data, in combination with the individual comments collected, helped to further inform the development of this document (see Appendix C for Summary of Individual Comments per emphasis area).

Recommendations for Management of Activities

Emphasize environmental education at Sabino Canyon

Enlarge the visitor center and create new exhibits that give short term visitors a glimpse of Sabino Canyon's rich resources.

- Use the Sabino Canyon Interpretive Plan.
- Promote activities that enhance education, interpretation, and appreciation of the natural environment.
- Provide places for Sabino Canyon Volunteer Naturalists and Children's Forest activities.

Maintain the natural character of Sabino Canyon

- Improve the condition of the entry, parking lot, visitor center and all recreation areas.
- Minimize incompatible noises in Sabino Canyon.
- Minimize the generation of pollution in the Canyon.
- Consolidate facilities where possible. Remove or relocate less desirable or deteriorating facilities.
- Remove non-functional facilities.
- Incorporate native materials and historical character into all new construction.
- Minimize overall visual impact of facilities in the Canyon.
- Complete a sign plan for the Canyon (safety, orientation, interpretation, rules & regulations, etc.) in accordance with the Coronado National Forest Visitor Information Sign Plan.
- Protect and restore buffer strips of natural desert along the boundaries of Sabino Canyon as well as around the Visitor Center, along shuttle routes and trails, and near the wilderness boundary.

Provide a spectrum of compatible activities for people to enjoy the Canyon

- Provide for a variety of day-use outdoor opportunities including walking, hiking, running, bicycling, picnicking, nature viewing, environmental education, equestrian use and quiet contemplation.
- Design and manage recreation areas primarily for pedestrians and hikers while also considering other uses and accessibility.
- Improve access for visitors with disabilities wherever feasible; in some areas some people may need assistance.
- Preserve a variety of settings. Settings should range from accessible and highly developed (Visitor Center) to remote and wild (trails).
- Each focus area should have a unique sense of place: some developed with easy access and facilities, some more natural and left for discovery experiences.
- Provide a range of trail opportunities from short, barrier-free trails to rugged trails into the wilderness.
- Provide horseback opportunities only where resource damage and user conflicts will be minimal.
- Provide commercial and other permitted activities that support nature-based experiences; do not approve permits that would degrade this experience for other users.
- Continue to provide for wildlife viewing.

Maintain ecosystem integrity

- Where possible, locate facilities away from riparian vegetation, but provide places for visitors to spend time streamside.

- Re-vegetate only with locally collected species native to Sabino Canyon.
- Reduce or eliminate invasive and/or noxious non-native plants and animals where reasonable and practical.
- Maintain or enhance habitat for Forest Service listed sensitive species.
- Minimize species loss caused by human activities.
- In decision making, consider that the riparian ecosystem is unique and ecologically important and try to mitigate any potential impacts from recreation.
- Create partnerships with universities and research organizations to increase the knowledge and understanding of the ecosystems in Sabino Canyon.
- Implement desert and riparian ecosystem monitoring.

Preserve and interpret cultural resources

- Protect the character of the historic low water crossings.
- Protect the historic Lowell complex (built by Civilian Conservation Corps and placed on the National Register of Historic Places) where practical.
- Interpret historic and prehistoric features in the canyon.
- Inform visitors about Native Americans who have used Sabino Canyon.

Encourage sense of public ownership and responsibility

- Encourage partnerships (Sabino Canyon Volunteer Naturalists, Friends of Sabino Canyon, Santa Catalina Volunteer Patrol, etc.) as well as internships and mentor programs.
- Discourage vandalism, litter, and other irresponsible behavior.
- Give the public a better understanding on how their fee money is utilized.

Maintain and/or create a sustainable recreation area

- Create a user-friendly fee system in parking area and Visitor Center.
- New facilities should be paid for and/or maintained by sustainable sources and using sustainable materials whenever possible.

Recommendations for Management of Settings

Outdoor recreation participants often have a particular activity in mind and wish to do that activity in a particular setting. Some visitors want a setting that includes large groups of friends and a recreation space with modern facilities. Others want to get away from crowds and built facilities. It is important to maintain a spectrum of settings so that people can find what they are seeking. The Forest Service uses a setting management tool called the “Recreation Opportunity Spectrum” (ROS) to map and plan for various settings (Clark and Stankey, 1979). Guidelines for the ROS system are useful for describing the desired settings within Sabino Canyon. The setting indicators include: access, remoteness, naturalness, facilities, social encounters, visitor impacts, and visitor management.

Architectural Theme

All facilities should be in character with the Canyon, blending with the same textures and colors of the cliffs above, following topography, and always being subordinate to the natural setting. Architectural styles should blend with stone bridges and dams as well as the other historic structures in Sabino

Canyon. Future facilities should comply with visual guidelines in the Built Environment Image Guide (BEIG) for the Southwest Region (USDA, 2001). Facilities should be sited, planned and constructed with a goal of creating sustainable facilities that reduce costs and resource impacts.

Road Construction

Paved travelways are necessary to accommodate the motorized shuttle, bicycles, and provide accessibility, but should be minimized to increase ecosystem resilience and minimize facilities costs, especially in areas of remoteness. The management objective for roadways within Sabino Canyon is to maintain roads to a consistent width and provide a flush (at road surface level), uniform edging. Additional uniform, level travelway surfaces are needed for a few, select locations for emergency vehicle parking, Volunteer Naturalists activity parking, shuttle stops, shuttle passing lanes, construction staging, and maintenance vehicle parking. To the greatest extent possible, these areas should be created using a pervious surface. Any new roadways will include emergency vehicle access.

Emphasis Areas for Activities

Interpretive Resources

- Develop electronic options for maps, brochures and educational information.
 - Improve the website and phone system to convey general recreation information.
 - Add Wi/Fi to the Visitor Center.
 - Work with the Sabino Canyon Volunteer Naturalists (SCVN) and Sabino Shuttle operators to research, develop and offer educational and interpretive information through web portals and app-based options.
 - Identify and delineate our recreational opportunities.
- Provide volunteers and partners with interpretive training to improve the visitor experience. Work with local institutions to shape and offer training.
- Improve Sonoran Desert Interpretation – add Sonoran Desert information to the Bajada Loop Trail, and SCVN and Children’s Forest programs (hard copy and digital).
- Improve shuttle narration content and delivery method.
- Update and improve visitor center displays.

Environmental Education

- Designate specific areas in Sabino Canyon as an official Children’s Forest sites. These areas are already used by SCVN to host youth-based nature programs and designation will allow youth an additional opportunity to help manage it. Areas to start with include:
 - The Bajada Loop Trail, with a focus on families with small children, limited time to explore the larger Canyon, and persons with limited mobility.
 - Cactus Picnic Area, with a focus on introductory conservation education for early elementary school-aged children.
 - The Lower Sabino Creek Area, with a focus on intensive, immersive conservation education and stewardship activities for middle and high school students.
- Over time and in harmony with ongoing maintenance, update existing restrooms and shade structures in Lower Sabino Creek and Cactus Picnic Area to better serve large groups of children

and reduce ongoing maintenance needs. The health and safety needs of children, especially young children, should guide facilities decisions in these areas.

- Remove and restore the restroom by the dam. Add pedestrian bridge near historic upper low water crossing.
- Change the Visitor Center Conference Room to include a “classroom” for environmental education programs. Test programmatic/management components before investing in facilities renovations.
- With assistance and input from partners, develop a conservation education program aimed at adults. Identify key themes, delivery methods and locations (Visitors Center, Lowell House, Sabino Dam, etc.).

Transportation

- Improve traffic flow of front parking lot by developing additional access to the parking lot along Sunrise and Sabino Canyon Road at the traffic signal, using Forest property to the south of the lot.
- Work to improve traffic safety with adjacent schools.
- Work with municipal governments to support parking infrastructure and a shuttle system to Sabino Canyon to alleviate parking concerns.
- Minimize conflicts between drivers and bicyclists/pedestrians by developing a separate entryway.
- Reduce exhaust and noise pollution, and improve accessibility by switching to a carbon neutral shuttle system.
- Include options for silent or quieter shuttle operator narration.
 - Explore the option of flexible shuttle scheduling based on seasonal or event-based needs. Consider an earlier morning shuttle start time for summer hours for both Sabino and Bear Canyon.
- To prepare for potential catastrophic failure of the road to upper Sabino Canyon, begin emphasizing shuttle routes to Bear Canyon Overlook. Reorient shuttle route to west side of Lower Sabino only.
 - Also emphasize bicycle and pedestrian routes to Bear Canyon Overlook. Plan efforts to reduce conflicts with the shuttle.
 - Explore Bear Canyon bicycling access all day long during winter season, with the exception on Wednesdays/Saturdays when bicycling in the main canyon is prohibited.
- Add signage to both Sabino and Bear Canyon roads that instructs bicycles to yield to pedestrians.
 - Increase Forest Service and Volunteer Patrol presence.

Facilities/Fees

- Build Sabino North Visitor Facility – Utilize parking area north of the existing Sabino Canyon Recreation Area (SCRA) seasonally for high peak use. Add restroom, trailhead, and picnic facilities. Add a pedestrian bridge, interpretive signage, and fencing along the access trail and entry along the main road.

- Re-locate shuttle staging operations – Relocate existing shuttle yard to the west side of the old shooting range based on the development of the Sabino North Visitor Facility.
- Renovated Visitor Center – Based on existing/projected changes in use and need, develop a proposal for minimal renovations with partners.
 - With partners and the Supervisor’s Office (SO), develop rental and leasing options to support the functions and programs of the Visitors Center.
 - With partners, develop sponsorship opportunities to support renovation and 10 years of ongoing maintenance. Critical element dictating feasibility of renovations.
- Improved Interpretive Program – with partners, pilot an ongoing exhibition program with the goal of refreshing interpretive displays in the Visitor Center and nearby outdoor space on a quarterly basis.
 - Work with partners and associated institutions to develop minimal exhibit standards.
 - Unit will focus on *sustaining a gallery space with partner support*. Content for exhibits will be provided by partner institutions, galleries, individuals, etc.
 - Provide for leasing of exhibition space at least twice a year.
- Mobile Base Camp – With partners, develop a mobile educational facility. Unit should comply with performance guidelines for “green” vehicles, require minimal maintenance and include flexible elements that can be used for multiple programs. Useable at remote programs with partners and in the Canyon.
- Improve Signage – Work with the SO and forestwide signage program to improve signage at the entrance and throughout the SCRA for accessibility, safety, and regulations. Add bilingual signage. Ensure all signs are in compliance with the Coronado National Forest Guidelines for Visitor Information Signs (USDA, 2014).
- Bear Canyon Restrooms – Consider converting these restrooms into traditional vault toilets or removing/relocating them.
- Improve Accessibility- All existing and proposed facilities will be evaluated to meet agency standards for accessibility.
- Decommission non-historic dilapidated sites – Develop a thorough site inventory of all infrastructures within the SCRA. Remove miscellaneous concrete debris and slabs from removed structures and relocate boulders that were once used for vehicle traffic control. Remove manmade debris below Stop 9 and remove unnecessary walls. Re-vegetate where applicable.
- Increase revenue generated by facilities – before increasing fees, look at options to rent or lease facilities or expand parking options at the same price-point.

Trails

- Bajada Loop Trail – Improve loop walkway to increase accessibility, improve interpretation and eliminate dead ends.
 - Updated memorial garden with input from SCVN.
 - Consider adding low maintenance shade structures.
- Increase Interpretive Trail Loops – Consider adding the historic trail behind the old shooting lanes and the Cactus Picnic Area for addition to the trail system. Potential for trail to extend to

old mine quarry near the Rattlesnake Trail in conjunction with development of the Sabino North Visitor Facility.

- Bear Canyon Entrance – Work with Pima County to improve or eliminate the Bear Canyon entrance to SCRA.
 - Consider development of a fee-based parking lot to be managed by Pima County, fees to match SCRA parking lots.
 - Consider traffic and parking impacts on neighborhood near this parking lot.

Ecosystem Integrity

- Invasive Species Removal – through partnerships and volunteer options, expand removal of invasive species along trails/roads and in riparian areas.
- Restore /decommission user created trails and areas of decommissioned parking/recreation sites (ex. Borrow pit, remnant shooting lanes, obsolete picnic and restroom sites).
- Vegetative Restoration – pole planting in areas where invasive species have been removed.
- Assess and monitor wildlife and natural resource impacts, both positive and negative, related to recreational use.
- Identify Ecosystem Threshold – define ecosystem sustainability and ecological capital of SCRA.
- Identify NGO and government resources and funding for species and ecosystem restoration.

Partnership & Volunteer Program Development¹

- Provide orientation on guiding documents and their implications for future planning to partners – Sky Islands Children’s Forest Strategic Plan (USDA, 2012), Southwestern Region Sustainable Recreation Strategy (USDA, 2013), and others.
- Work with local institutions and partners to develop a naturalist training program.
 - Identify both mandatory and optional/recommended groups to attend, including staff in frequent contact with the public.
 - Shuttle staff should meet reasonable, consistent standards for naturalist training.
- Involve non-profit and for-profit partners in developing a program to increase revenues generated at SCRA. Revenue generation must be secondary to protecting resources and visitor experience.

In Ten Years

- New Visitor Center Facility – Demolition of existing facilities and proposal of a new indoor/outdoor facility. Solar and LEED certified. Update master plans for visitor parking, shuttle facilities, trailheads, day-use and conservation education facilities.
 - Goals to reduce traffic into the site, with concurrent reductions in air/noise pollution and congestion on nearby roads.
 - Potential public transit access into/near the Recreation Area

¹ The Partnership and Volunteer Program Development emphasis area was added after the May and July public meetings. There are no public comments specific to this emphasis area.

- Scenic Trail – Proposed trail extending up Sabino Canyon on the southeast side located between the Phoneline and Creek Trail to provide an emergency route out of the Canyon during flooding events.

Appendix A – Team Members

Core Team

Henry Provencio, Acting District Ranger
Linda Stamer, Visitor Center Manager
Michael Hill, Acting District Recreation Staff
Mindi Lehew, Dispersed Recreation Manager
Paul Simpson, Developed Recreation Manager
Stan Helin, District Ranger

Extended Team

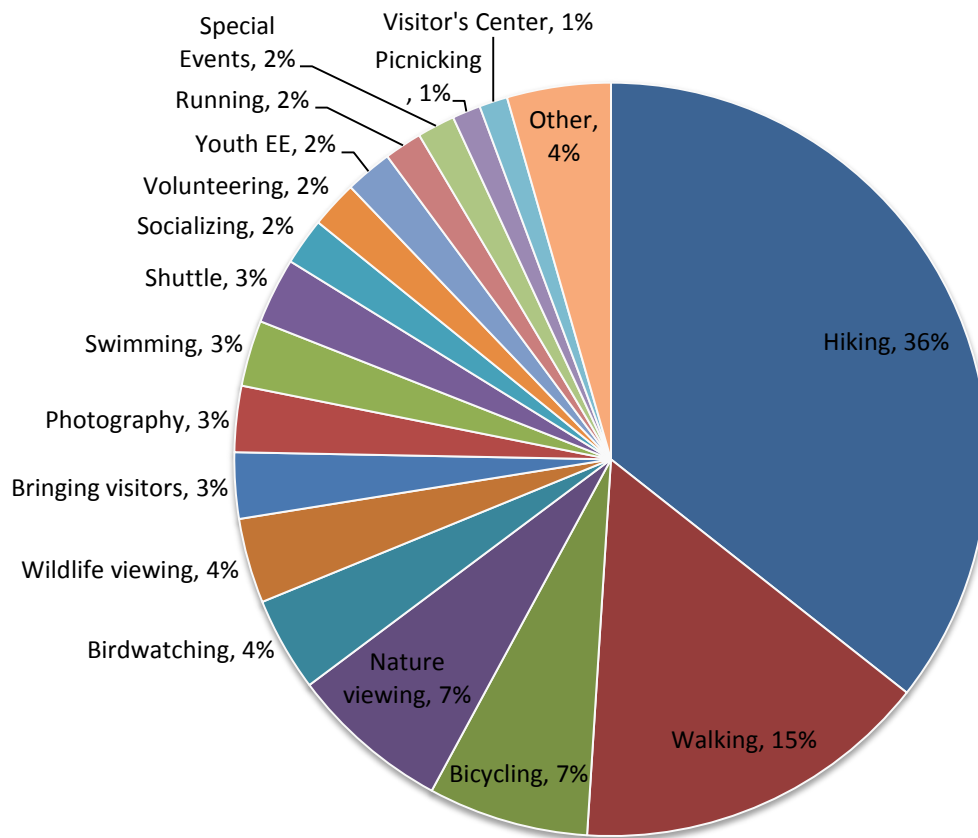
Chrissy Pearson, District Range & Invasive Species Coordinator
Gregg Sasek, Wilderness/Trails Technician
Jim Sutton, Forest Special Uses Coordinator
John Thornburg, District Fire Management Officer
Josh Kemberling, Developed Recreation Technician
Josh Taiz, District Wildlife Biologist
Kathy Makansi, District Archaeologist
Ken Simons, District Business Management Officer
Leland Vought, Pathways Intern (Recreation)
Rachael Biggs, District Forester
Rodgers Wright, District Asst. Fire Management Officer
Roger Elias, Developed Recreation Technician
Shalonda Guy, Deputy District Ranger

Others

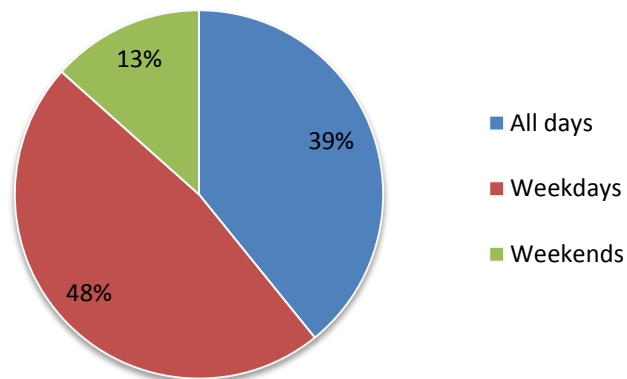
A special thank you to the many volunteers and organizations that generously support the Sabino Canyon Recreation Area and valuably contributed to this document.

Appendix B – Summary of Survey Results

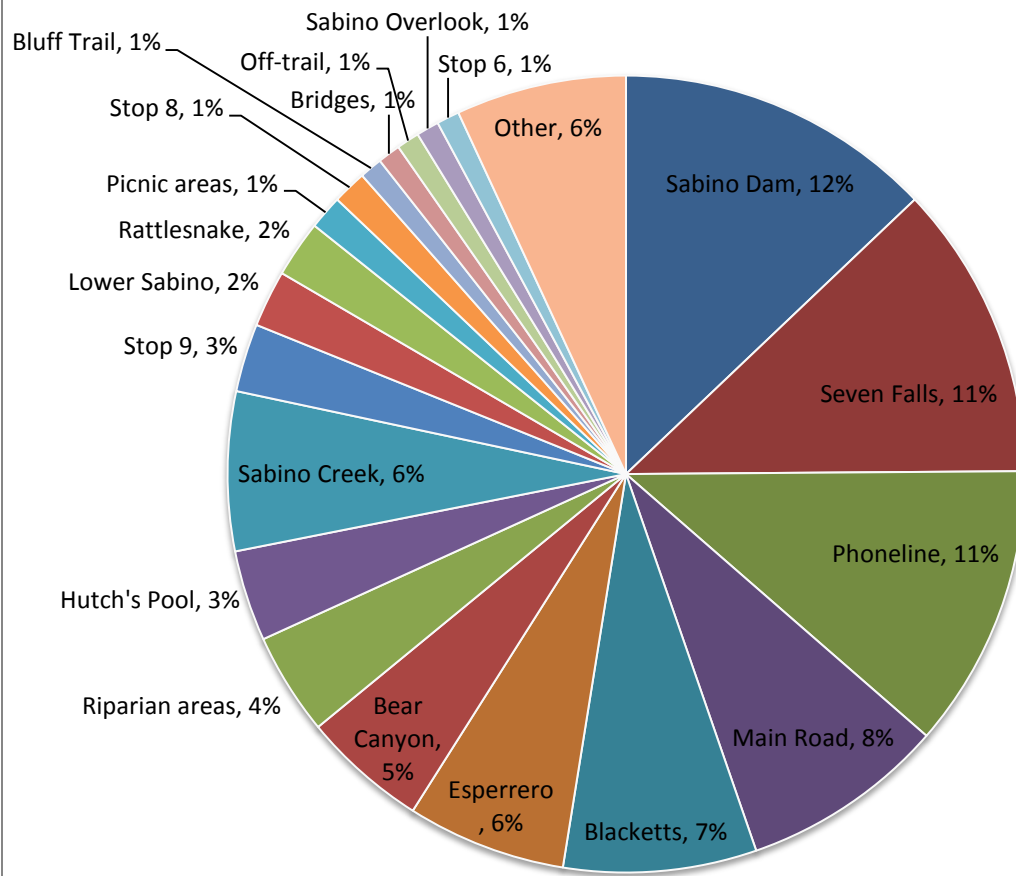
Preferred Activities in Sabino Canyon



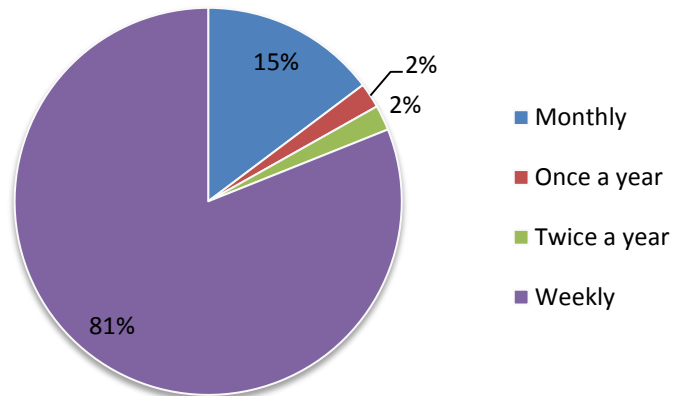
Preferred Visitation Days



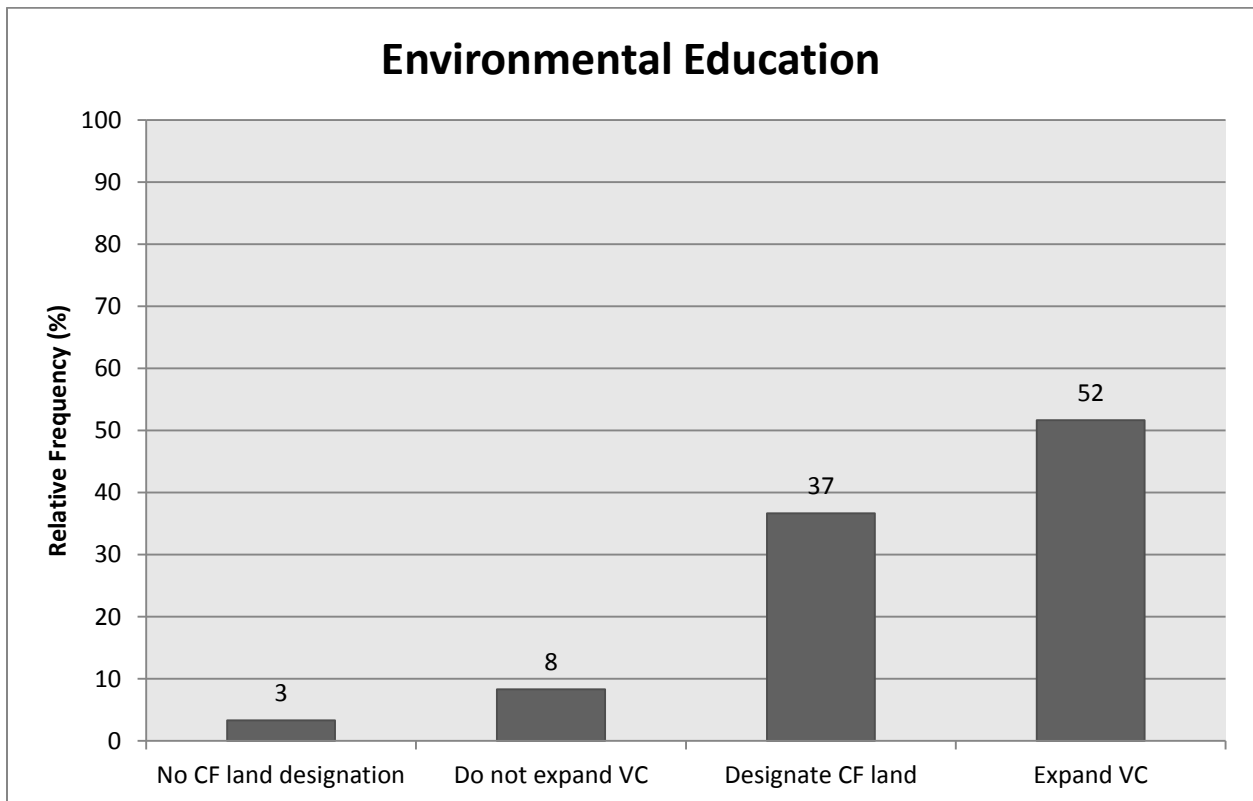
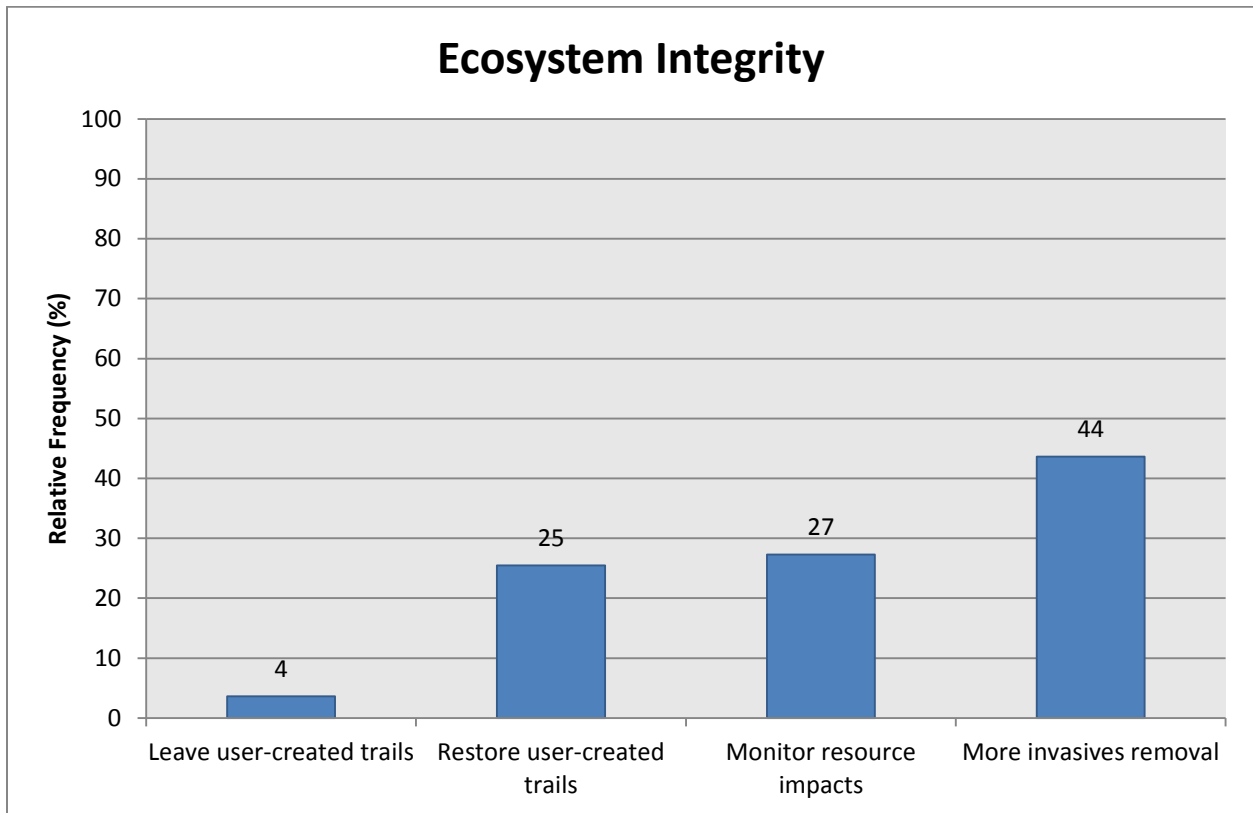
Favorite Locations in Sabino Canyon



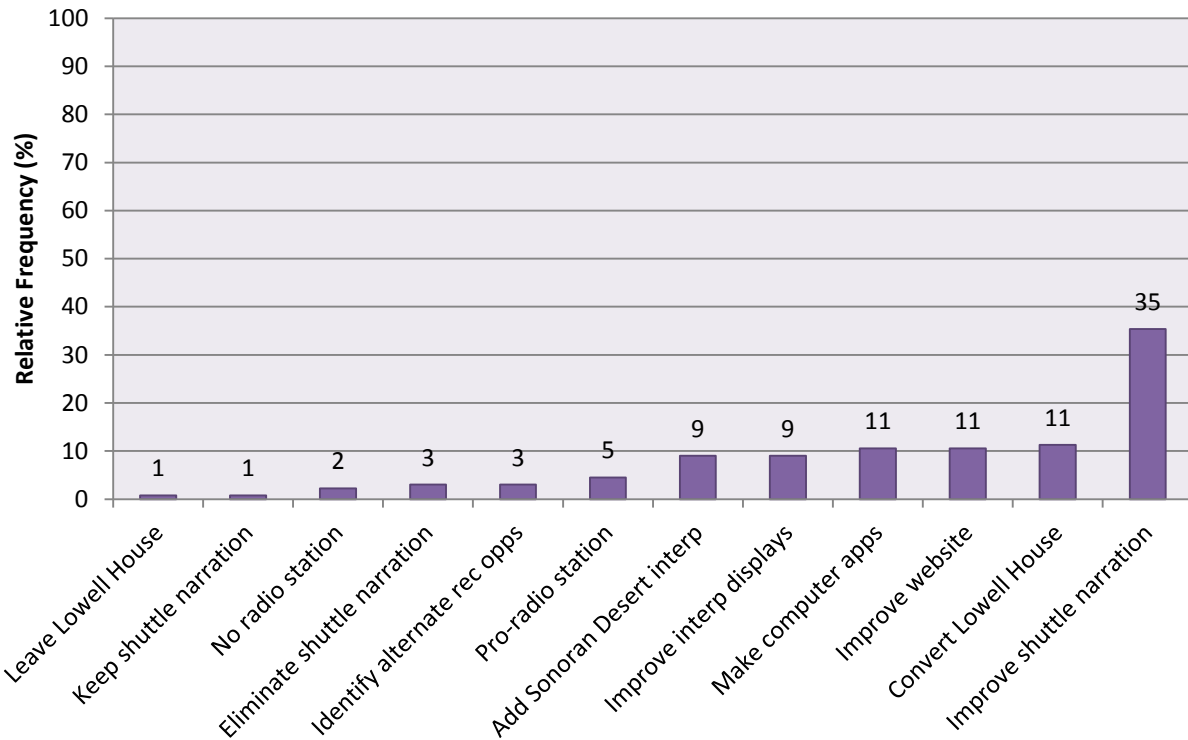
Frequency of Visitation



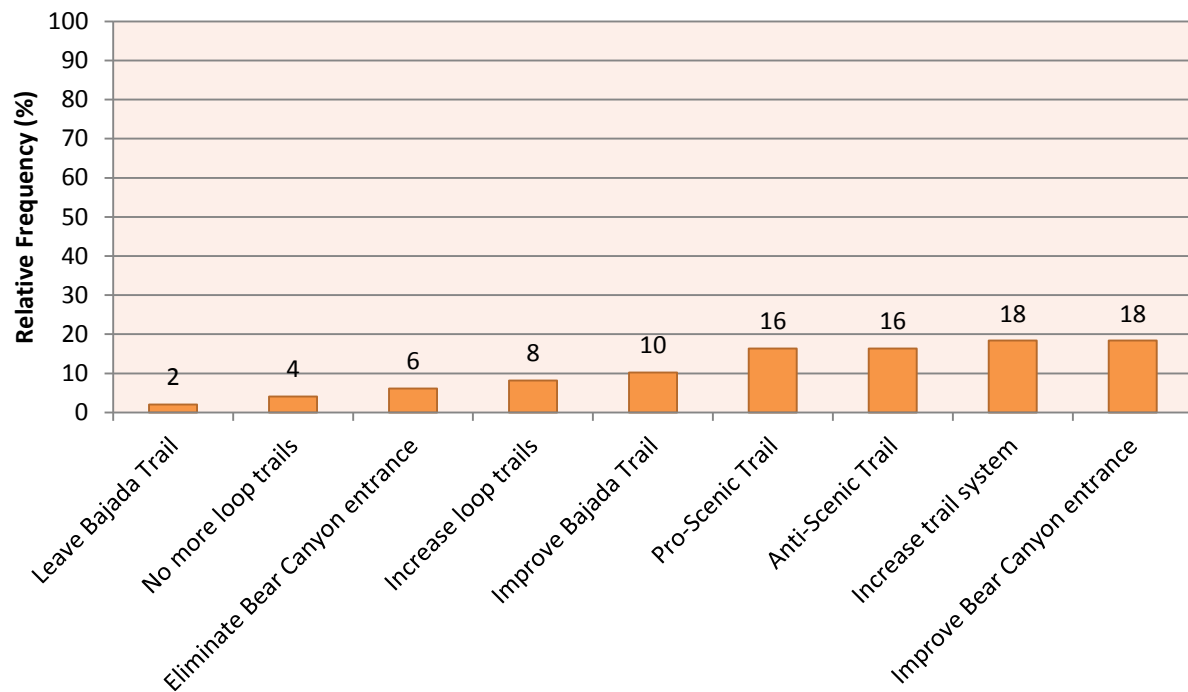
Appendix C – Summary of Individual Comments



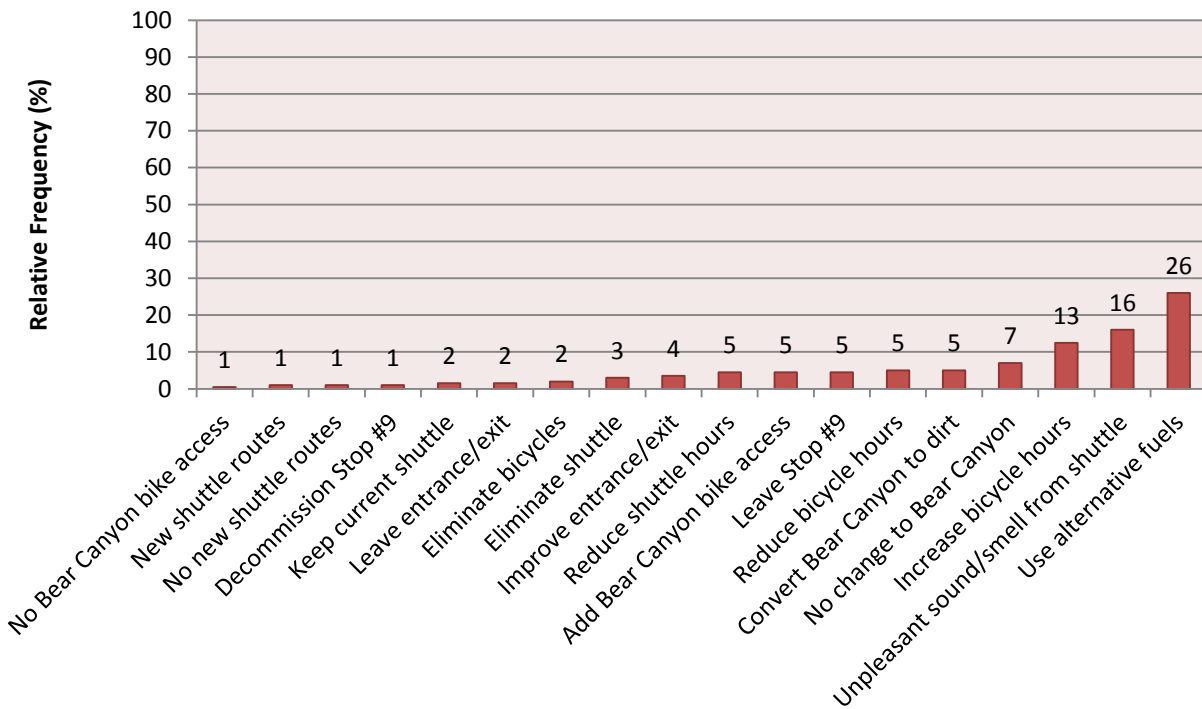
Interpretive Resources



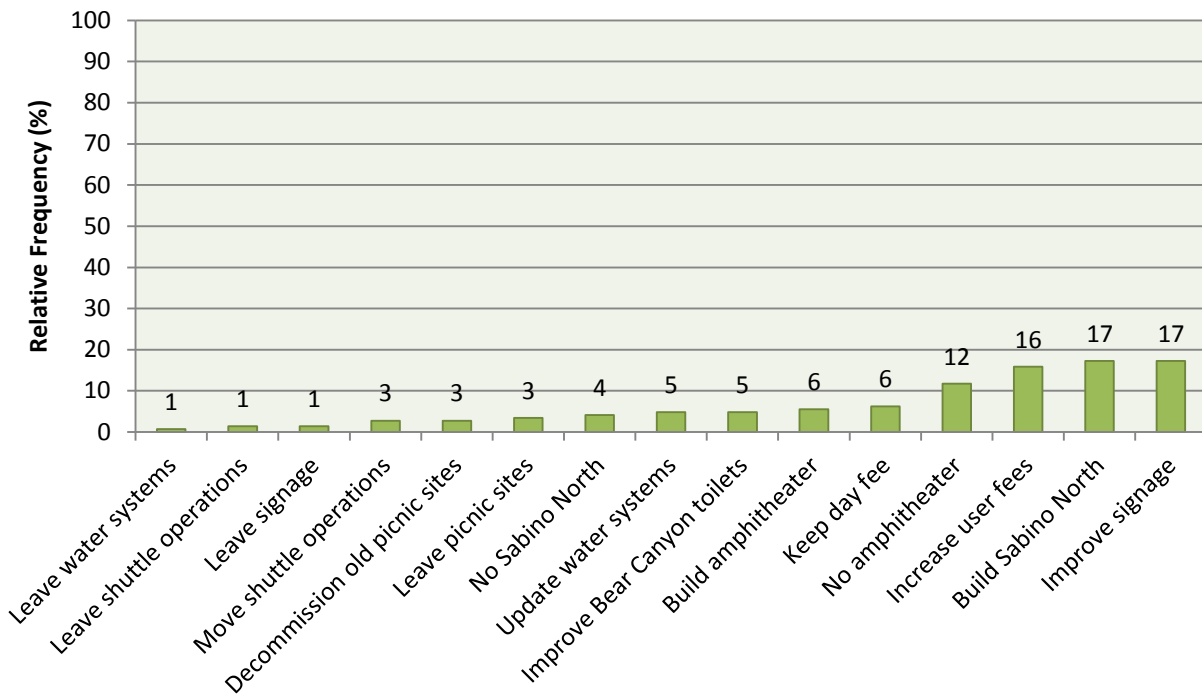
Trails



Transportation/Roads



Facilities/Fees



Appendix D – References

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